

Summary Report

Aerial Photograph Anomaly APHO 1
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro, California

27 January 2000

Prepared by
Southwest Division, Naval Facilities Engineering Command
BRAC Program Office
1230 Columbia Street, Suite 870
San Diego, CA

Summary Report

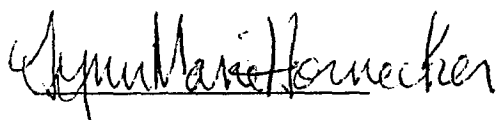
Aerial Photograph Anomaly APHO 1

Aerial Photograph Anomaly Program

Marine Corps Air Station, El Toro, California

27 January 2000

Prepared by:

A handwritten signature in black ink that reads "Lynn Marie Hornecker". The signature is written in a cursive style with a horizontal line underlining the name.

Lynn Marie Hornecker
Civil Engineer

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File: aph1ltr.doc

TRANSMITTAL

Date: 27 January 2000

From: Lynn Marie Hornecker

To: **Ms. Triss Chesney**
State of California Environmental Protection Agency
Department of Toxic Substances Control, Region 4
Site Mitigation Branch
Base Closure Unit
5796 Corporate Avenue
Cypress, CA 90630

Subj: Aerial Photograph Anomaly APHO 1 (SAIC 7)
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro

Provided for your review as the attachment is the Summary Report for Aerial Photograph Anomaly APHO 1, also known as Science Applications International Corporation (SAIC) 7, in the northwestern section of the Marine Corps Air Station (MCAS), El Toro. The location of APHO 1 coincides with the southeastern section of the former Tank Farm 3 facility. All tanks have been removed from the former Tank Farm 3. SAIC identified APHO 1 as stains near the aircraft apron on a photograph taken on 29 December 1946.

We evaluated historical aerial photographs, Station maps and plans, Station property records, environmental program management plans, and the results of previous environmental restoration program investigations, and we conducted visual inspections of the vicinity of APHO 1 in September and December 1999. No stains were observed at APHO 1 during the visual inspections. The results of our record search activities and observations from the site inspections are presented in the attached Summary Report.

Field sampling was conducted at or near APHO 1 during verification of ground water conditions at the former Tank Farm 3 and following the removal of the inactive underground storage tanks from former Tank Farm 3 in 1996. The APHO 1 area was excavated during the removal of the inactive tanks from the former Tank Farm 3. Based upon the absence of records identifying significant releases at APHO 1 and the results of our visual inspections, we are requesting that *no further action status* be designated for APHO 1 (SAIC 7) in the next Base Realignment and Closure (BRAC) Business Plan update.

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File: aph1ltr.doc

If we do not receive comments from you within sixty days of receipt of this document, then we will assume that you concur with our conclusions and we will continue our evaluation of historical aerial photograph anomalies. A formal transmittal letter may follow.

If you have questions, please do not hesitate to contact me at (619) 532-0783. Thank you very much.

Attachment

- Summary Report, Aerial Photograph Anomaly APHO 1 (SWDIV, January 2000)

CF: w/attachment

Glenn Kistner (USEPA)

Patricia Hannon (RWQCB Santa Ana Region)

Dean Gould (MCAS El Toro)

Project File (MCAS El Toro)

M60050.002913
MCAS EL TORO
SSIC # 5090.3

SUMMARY REPORT ADDENDUM
AERIAL PHOTOGRAPH ANOMALY APHO 1

DATED 11 APRIL 2000

IS ENTERED IN THE DATABASE AND FILED AT
ADMINISTRATIVE RECORD NO. **M60050.002915**

TABLE OF CONTENTS

Section	Page
1 Introduction	1
2 Field Inspections and Historical Records	2
3 Findings and Recommendations	5
4 References and/or Sources of Information	6

Figures

- Figure 1. APHO 1 Vicinity Map
Figure 2. APHO 1 Conceptual Site Model

Appendix

Site Photographs And Other Documentation

Section 1

Introduction

The purpose of this Summary Report is to present information pertaining to the aerial photograph anomaly, designated as APHO 1 in the Base Realignment and Closure (BRAC) Cleanup Plan (BCP) of 1999, located within the former Tank Farm 3 and adjacent to Building 624 at the Marine Corps Air Station (MCAS), El Toro. APHO 1 was identified by Science Applications International Corporation (SAIC) as SAIC 7 during a review of historical aerial photographs, and the anomaly is described as stains on the area adjacent to the aircraft parking apron. APHO 1 (SAIC 7) was identified on an aerial photograph dated 29 December 1946.

The Marine Corps Air Station, El Toro, also known as the Station, comprises approximately 4,700 acres and is located in eastern Orange County approximately 45 miles southeast of Los Angeles, California. APHO 1 is located in the northwestern section of the Station near West Marine Way and North 6th Street as shown on Figure 1. APHO 1 encompasses an area approximately 300 feet wide and 400 feet long, and sections of APHO 16, APHO 34, and APHO 41 are located within the boundary of APHO 1. APHO 1 also includes the southeastern section of the former Tank Farm 3, and the underground storage tanks at former Tank Farm 3 were removed from the site in 1996.

The Station was closed on 2 July 1999 in accordance with the Base Realignment and Closure Act of 1993 (BRAC III). APHO 1 is located within a parcel tentatively identified as a future airport terminal and parking area according to *The Airport and Open Space Plan, Year 2020, Concept C* (County of Orange, August 1998) and according to *The Preferred Land Use Plan* (County of Orange, August 1999).

This Summary Report includes an evaluation of historical records, a description of information collected during the investigation of nearby Environmental Locations of Concern, and the results of the visual inspections of the site. Based upon the review of the historical information, the stained areas observed on the 1946 photograph were located within the boundary of the former Tank Farm 3. Consequently, the APHO 1 area was excavated during the removal of the inactive underground storage tanks from former Tank Farm 3. Based upon the absence of visual evidence of current or recent hazardous substances storage activities or releases, it is recommended that *no further action status* be designated for APHO 1 (SAIC 7) in the next BRAC Business Plan Update.

Section 2

Field Inspections and Historical Records

APHO 1 (SAIC 7), identified on a photograph dated 29 December 1946, is described by SAIC as follows: *There are stains (ST) adjacent to the aircraft parking apron at N 6th Place and K Street and at N 4th Place and K Street. Additional investigation of the sites is recommended.*

2.1 Field Inspections

APHO 1 Vicinity

The vicinity of APHO 1 was visually inspected by the Navy in September and December 1999 during inspections of nearby anomaly sites APHO 16, APHO 34, and APHO 41. APHO 1 is located within the southeastern section of the former Tank Farm 3 facility. All underground storage tanks have been removed from the tank farm and the site has been restored with a grass cover. The ground surface is relatively level. No stains or discolored areas were observed during the visual inspections. No items were being stored at the site at the times of the inspections, and the adjacent Building 624 was vacant at the times of the inspections.

The anomaly identified by SAIC on the December 1946 photograph consists of two linear features that may have represented surface drainages across former Tank Farm 3 (see Exhibit 3 in the Appendix). Wet soils or accumulation of surface runoff may have caused the appearance of stains on the 1946 photograph.

The stained areas observed on the 1946 photograph were excavated and removed from the site when the inactive underground storage tanks at the former Tank Farm 3 were removed.

Photographs of the vicinity of APHO 1 and a check list documenting the observations from the visual inspections are presented in the Appendix.

2.2 Environmental Program Records

Records of previously completed environmental restoration program investigations were acquired and reviewed, and several underground storage tank (UST) sites are located in the immediate vicinity of APHO 1. The southeastern section of the former Tank Farm 3, which included nine (9) underground storage tanks, coincides with the location of APHO 1. All tanks were removed from Tank Farm 3 in 1996, and tank removal and confirmation sampling activities were conducted with oversight by the Orange County Health Care Agency (OCHCA). A description of the types of data collected at or near APHO 1 at Environmental Locations of Concern is presented in Table 1.

Table 1. Investigation Activities at or near APHO 1.

Location of Concern Identification Number	Status	NFA or other Decision Document(s)	Comments
<i>APHO 1 Vicinity</i>			
Former Tank Farm 3 (UST Sites 188 (SWMU 277), 189 (SWMU 57), 190 (SWMU 278), 191 (SWMU 59), 192, 193 (SWMU 279), 194, 195 (SWMU 280), 219, 220, 221, T-4)	NFA.	OCHCA letter dated 13 November 1996	Tank removal and sampling activities were conducted with OCHCA oversight. Six (6) of the tanks at Tank Farm 3 were also investigated during the RFA. (Exhibit 4 in the Appendix shows tank and sample locations.)
<i>Near APHO 1</i>			
APHO 41 (a section of APHO 41 coincides with APHO 1)	NFA.	DTSC letter dated 18 October 1999	Historical records and environmental management plans and other environmental program records were acquired and reviewed.
APHO 16/APHO 34 (a section of APHO 16/34 coincides with APHO 1)	NFA.	DTSC letter dated 20 December 1999	Historical records and environmental management plans and other environmental program records were acquired and reviewed.
Anomaly Area 2 – Former Fuel Bladder Revetments (APHO 23 and others). Anomaly Area 2 is located southeast and southwest of APHO 1.	Field sampling was completed in 1999; data evaluation is in progress as of January 2000.	Not applicable	Historical records, other records, and the results of the field sampling activities are being reviewed.
UST 288	NFA.	OCHCA letter dated 2 December 1996	Tank removal and sampling activities were conducted with OCHCA oversight.
<i>Ground Water Data</i>			
Three monitoring wells were constructed along the perimeter of Tank Farm 3			Ground water monitoring reports have been submitted to the RWQCB Santa Ana Region.

Resource Conservation and Recovery Act Facility Assessment (RFA)

Six (6) of the underground storage tanks at the former Tank Farm 3 were investigated as Solid Waste Management Units (SWMUs 57, 59, 277, 278, 279, 280) during the Resource Conservation and Recovery Act Facility Assessment (RFA). The tanks were removed from the former Tank Farm 3 in 1996. Results of the RFA are published in the *Installation Restoration Program, Final Resource Conservation and Recovery Act Facility Assessment Report for Marine Corps Air Station, El Toro, California* (Jacobs Engineering Group, 1993).

BRAC Cleanup Plan (BCP) Information

The BCP update of 1999 (Tables 3-1a, 3-1b, and 3-2) describe the aerial photograph anomaly sites. Extracts from the BCP update of 1999 are presented in the Appendix. Table 3-2 includes a description of APHO 1 that is not consistent with the SAIC description due to a possible transcription error, *"The stains appear adjacent to the southeastern side of Tank Farm 3 where a former fuel bladder may have been located."* The annotations on the 1946 photograph in the SAIC Report of 1993 show two stained areas that bisect the former Tank Farm 3 facility, and consequently, it is recommended that the description for APHO 1 be revised as follows: ***"APHO 1 (SAIC 7) is described as stained areas within the former Tank Farm 3 facility adjacent to the aircraft parking apron."***

Environmental Baseline Survey

The Final Environmental Baseline Survey Report (JEG, 1995) did not identify temporary hazardous waste accumulation areas at APHO 1.

Hazardous Material/Hazardous Waste Management Plan

The Station's Hazardous Material/Hazardous Waste Management Plan (HM/HWMP) was reviewed and extracts pertaining to the vicinity of APHO 1 are presented in the Appendix. The HM/HWMP does not identify temporary storage of hazardous materials or wastes at APHO 1.

Storm Water Pollution Prevention Plan

The Station's Storm Water Pollution Prevention Plan (SWPPP) was reviewed and extracts from the SWPPP for the vicinity of APHO 1 are presented in the Appendix of this report. The map in the SWPPP shows a small surface drainage, a linear feature, that bisects the former Tank Farm 3 facility, and the accumulation of surface water in this drainage may have caused the appearance of a stain on the 1946 photograph. The drainage appears to flow toward the concrete channel located between APHO 1 and West Marine Way.

Surface water from the APHO 1 vicinity discharges to Bee Canyon Wash, located approximately 800 feet southeast of the site. A small concrete channel is located between APHO 1 and West Marine Way, and this channel discharges to Bee Canyon Wash.

Bee Canyon Wash and other surface drainage channels were investigated during the Remedial Investigation of Installation Restoration Program Site 25 – the Major Drainages. A Comprehensive Environmental Response, Compensation, and Liability Act Record of Decision identifying no action for IRP Site 25 was signed in 1997.

2.3 Historical Property Records

Property records including the Station's plant account data base were acquired and reviewed, and information pertaining to structures located near APHO 1 is summarized in Table 2.

Table 2. MCAS El Toro Property Records.
 APHO 1 Vicinity Buildings.

Building Identification Number	Approximate year of acquisition or construction	Type of Use	Comments
<i>APHO 1 Vicinity</i>			
624	1967	Passenger Air Terminal and Squadron Headquarters (SOMS) per 1997 Building Guide	Building dimensions are approximately 120 feet long by 96 feet wide. Building was vacant during inspections. Building had not been constructed at the time of the 1946 aerial photograph.
<i>Southwest of APHO 1</i>			
14	1943	Squadron Headquarters	Building was vacant during inspections. Building is visible on the 1946 photograph.

2.4 Ground Water Conditions

Ground water conditions have been investigated in the vicinity of APHO 1 during the verification of conditions at former Tank Farm 3. The wells that were constructed around the perimeter of Tank Farm 3 surround APHO 1. Ground water is located approximately 170 feet below ground surface based upon measurements from these wells. Ground water samples were collected from the wells during 1996 and 1997, and no petroleum hydrocarbons, benzene, toluene, ethylbenzene, xylenes, or methyl tert-butyl ether (MTBE) were detected at or above laboratory reporting limits. Ground water flows to the northwest in the vicinity of APHO 1. Selected ground water information is presented in the Appendix, and a conceptual site model is shown on Figure 2.

The nearest Installation Restoration Program (IRP) monitoring wells are located approximately 1,800 feet north of APHO 1 at IRP Site 20 – the Hobby Shop.

Section 3

Findings and Recommendations

The following findings are based upon information collected during the record search activities and from observations during the visual inspections of the APHO 1 vicinity:

- SAIC identified APHO 1 (also known as SAIC 7) as stains located adjacent to the aircraft parking apron based upon the review of an aerial photograph taken on 29 December 1946.
- The APHO 1 description in Table 3-2 in the BCP is inconsistent with the SAIC description and annotations on the historical photograph and revision of the description is recommended: ***"APHO 1 (SAIC 7) is described as stained areas within the former Tank Farm 3 facility adjacent to the aircraft parking apron."***
- APHO 1 coincides with the southeastern section of the former Tank Farm 3. All underground storage tanks were removed from the former Tank Farm 3 in 1996, and the Orange County Health Care Agency has identified no further action status for the former Tank Farm 3.
- The Hazardous Material/Hazardous Waste Management Plan and the Storm Water Pollution Prevention Plan do not identify storage of hazardous substances at APHO 1.
- The APHO 1 vicinity was visually inspected by Navy representatives in September and December 1999, and no evidence of stains or discolored areas was observed.

Based upon the results of the evaluation of historical records, the results of field sampling conducted at the former Tank Farm 3 facility, the results of the visual inspection, and the absence of visual evidence of a release of hazardous substances at APHO 1, it is recommended that *no further action status* be designated for APHO 1 (also known as SAIC 7) and that *no further action status* be documented in the next BRAC Business Plan Update.

Section 4

References and/or Sources of Information

California Environmental Protection Agency, Department of Toxic Substances Control. 1999. Correspondence. Letter to Marine Corps Air Station, El Toro dated May 12, 1999 with Comments on Technical Memorandum, Aerial Photograph Anomalies, Marine Corps Air Station, El Toro.

California Environmental Protection Agency, Department of Toxic Substances Control. 1999. Correspondence. Letter to Marine Corps Air Station, El Toro dated 18 October 1999. Concurrence with No Further Action recommendation for APHO 41.

California Environmental Protection Agency, Department of Toxic Substances Control. 1999. Correspondence. Letter to Marine Corps Air Station, El Toro dated 20 December 1999. Concurrence with No Further Action recommendation for APHO 16 and APHO 34.

CDM Federal Programs Corporation. 1998. Final Groundwater Monitoring Report, October 1997 Sampling Round, Groundwater Monitoring Program for Marine Corps Air Station, El Toro. [Navy Contract N68711-96-D-2029, Delivery Order 5]

County of Orange. 1997. Alternative A, El Toro Community Reuse Plan, 1997 Working Map, Land Uses/Conveyances, Gross Acres. [Prepared by P&D Consultants for the County of Orange, March 1997.]

County of Orange. 1998. The Airport and Open Space Plan, Year 2020, Concept C. August. [prepared by the MCAS El Toro Local Redevelopment Authority]

County of Orange. 1999. Preferred Land Use Plan, Concept B. August. [prepared by the MCAS El Toro Local Redevelopment Authority]

Integrated Environmental Management (IEM). 1997. Storm Water Pollution Prevention Plan (SWPPP) for Marine Corps Air Station, El Toro, El Toro, California. July. [Contract No. N68711-96-D-2059, Delivery Order Number 0002] *{Annotation: The IEM planning document included the acquisition and review of historical and current plans of facilities and utilities. Extracts from the IEM report are presented in the Appendix.}*

Jacobs Engineering Group (JEG). 1993. Installation Restoration Program, Final Resource Conservation and Recovery Act Facility Assessment Report for Marine Corps Air Station, El Toro, California. [Navy Contract N68711-89-D-9296, Contract Task Order 193]

Jacobs Engineering Group (JEG). 1995. Marine Corps Air Station, El Toro, El Toro, California, Final Environmental Baseline Survey Report. April. [Navy Contract N68711-89-D-9296, Contract Task Order 284]

OHM Remediation Services Corporation. 1997. Draft Groundwater Monitoring Report, Petroleum Storage Facilities at Various Locations, Marine Corps Air Station, El Toro, California. April.

OHM Remediation Services Corporation. 1997. Technical Memorandum, Groundwater Monitoring Report, Petroleum Storage Facilities at Various Locations, Marine Corps Air Station, El Toro, California. November.

Science Applications International Corporation (SAIC). 1993. Final Report, Aerial Photograph Assessment, MCAS El Toro, Contract N68711-91-D-4658, Delivery Order 0002, SAIC Project No. 01-0892-0817.

Science Applications International Corporation (SAIC). 1994. Final, Marine Corps Air Station, El Toro, Hazardous Material/Hazardous Waste Management Plan {with Appendices C and I, Hazardous Waste Accumulation Areas and Photographs of Accumulation Points and Hazardous Material Storage Areas}. August. [Contract N68711-92-D-4658, Delivery Order Number 4.]

Southwest Division, Naval Facilities Engineering Command. 1999. Technical Memorandum, Aerial Photograph Anomalies, Marine Corps Air Station, El Toro, California. April.

Southwest Division, Naval Facilities Engineering Command. 1998. Technical Memorandum, Groundwater Data Summary, Petroleum Storage Facilities at Various Locations, Marine Corps Air Station, El Toro, California. September.

United States Environmental Protection Agency. 1991. Site Analysis, El Toro MCAS, Orange County, California.

United States Marine Corps Air Station, El Toro. 1999. Base Realignment and Closure (BRAC) Cleanup Plan.

U.S. Marine Corps Air Station, El Toro. 1997. Draft Final Record of Decision, Operable Units 2A and 3A, No Action Sites, Marine Corps Air Station, El Toro, California. September.

United States Marine Corps Air Station, El Toro. 1997. Building Guide.

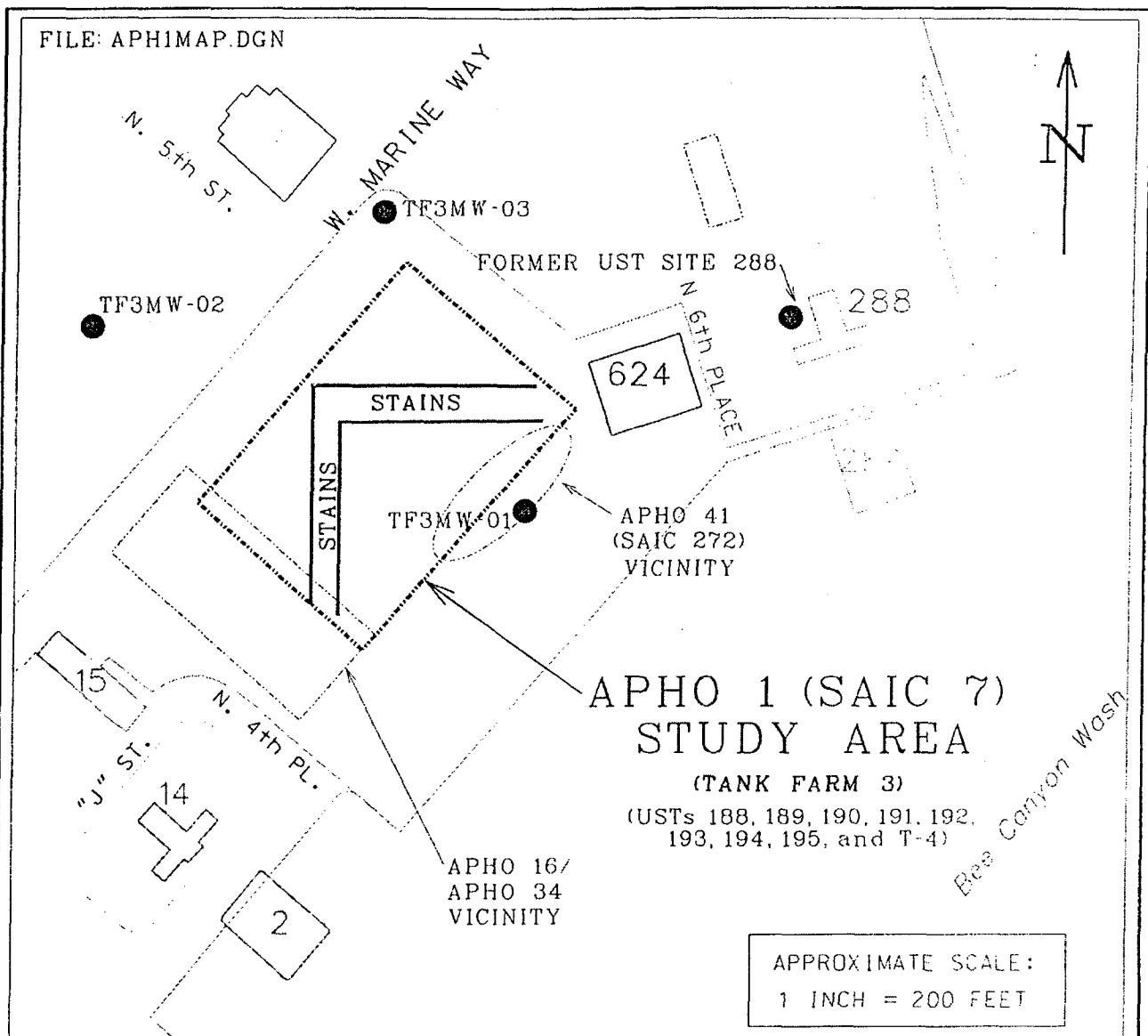
United States Marine Corps Air Station, El Toro, Public Works Department. 1954. Master Plot Plan, Proposed Additional Aircraft Parking Facilities in Tactical Area III and Proposed Relocation of Existing Stables. [Alternate drawing identification number Public Works drawing PS-1236]

United States Marine Corps Air Station, El Toro. Circa 1946-1999. Station Property Records.

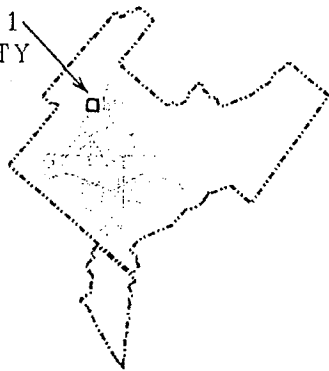
United States Marine Corps Air Station, El Toro. 1999. Station's Underground Storage Tank Program Records.

Figures

FILE: APH1MAP.DGN



APHO 1
VICINITY



MARINE CORPS AIR STATION
EL TORO

NOTE: LOCATIONS OF WELLS AND TANK
SITES ARE APPROXIMATE AND ARE
PROVIDED FOR PURPOSES OF
ILLUSTRATION ONLY.

Figure 1.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

APHO 1 VICINITY MAP

MARINE CORPS AIR STATION, EL TORO

APHO 1 VICINITY
FORMER TANK FARM 3

BLDG 624

PRECIPITATION

SURFACE RUNOFF

APPROXIMATELY 170 FEET

VADOSE
ZONE

SATURATED
ZONE

BEDROCK

LEGEND:

RECEPTORS:



WORKERS



VOC-IMPACTED SOILS

PATHWAYS:



GROUND WATER

NOTE: DRAWING IS NOT TO SCALE.

Figure 2.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

**APHO 1 CONCEPTUAL SITE
MODEL**

MARINE CORPS AIR STATION, EL TORO

Appendix

Site Photographs and Other Documentation

Site Photographs

Check List Form

Exhibits

Extracts from Base Realignment and Closure Cleanup Plan (BCP)

Extracts from SAIC Study

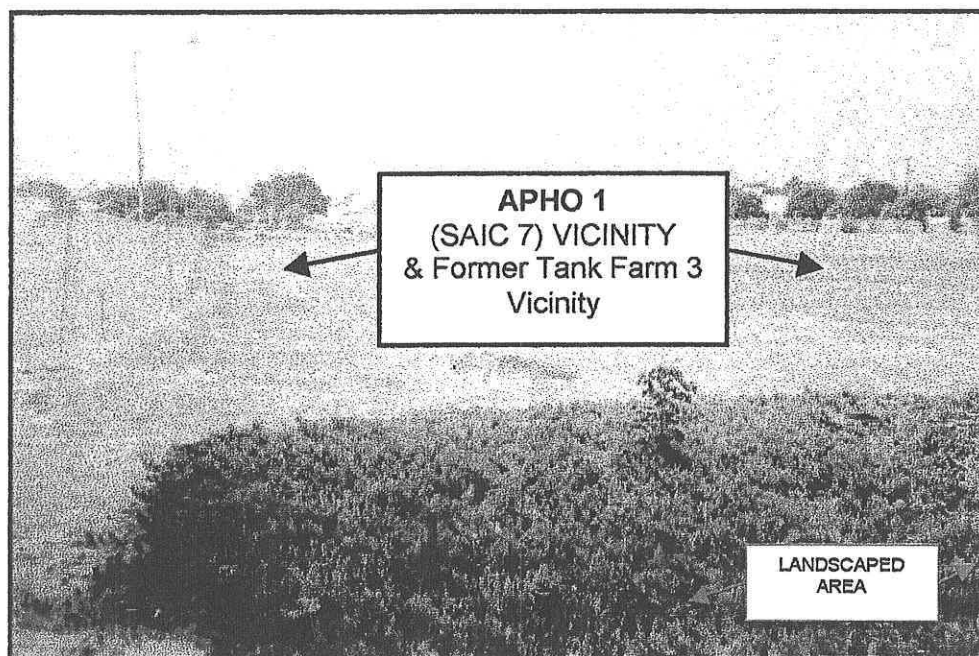
Extracts from SWPPP

Extracts from HM/HWMP

No Further Action Documents (Closure Letters) for Nearby Environmental
Locations of Concern and Ground Water Information

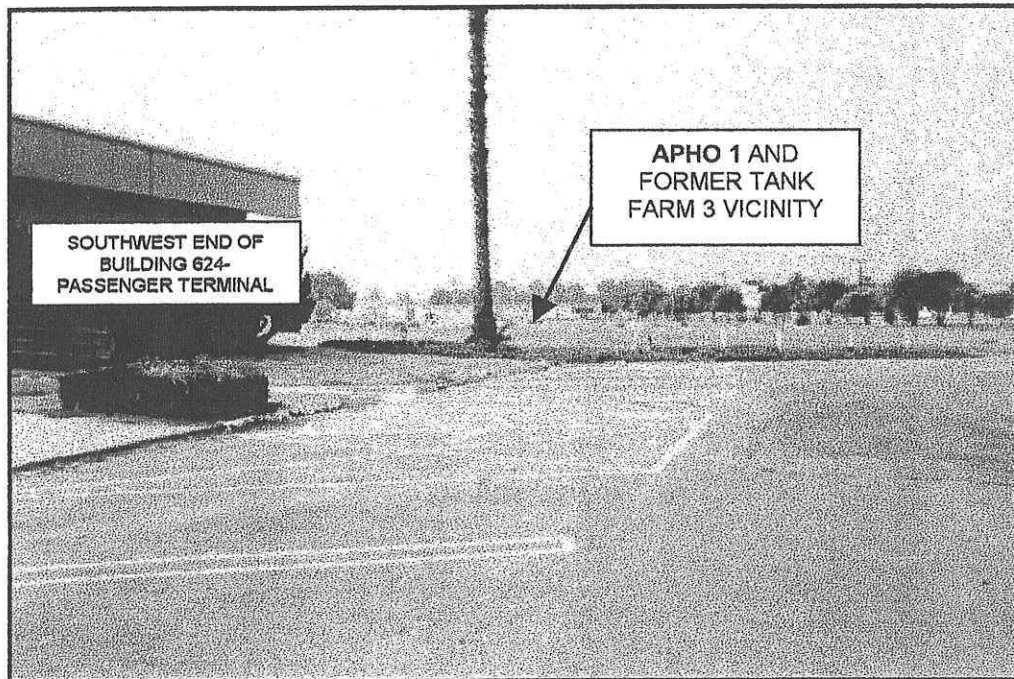
**Photograph 1. APHO 1 (SAIC 7) Vicinity.
Stains (identified on 1946 aerial photograph).
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro**

Date of Photograph: 5 September 1999



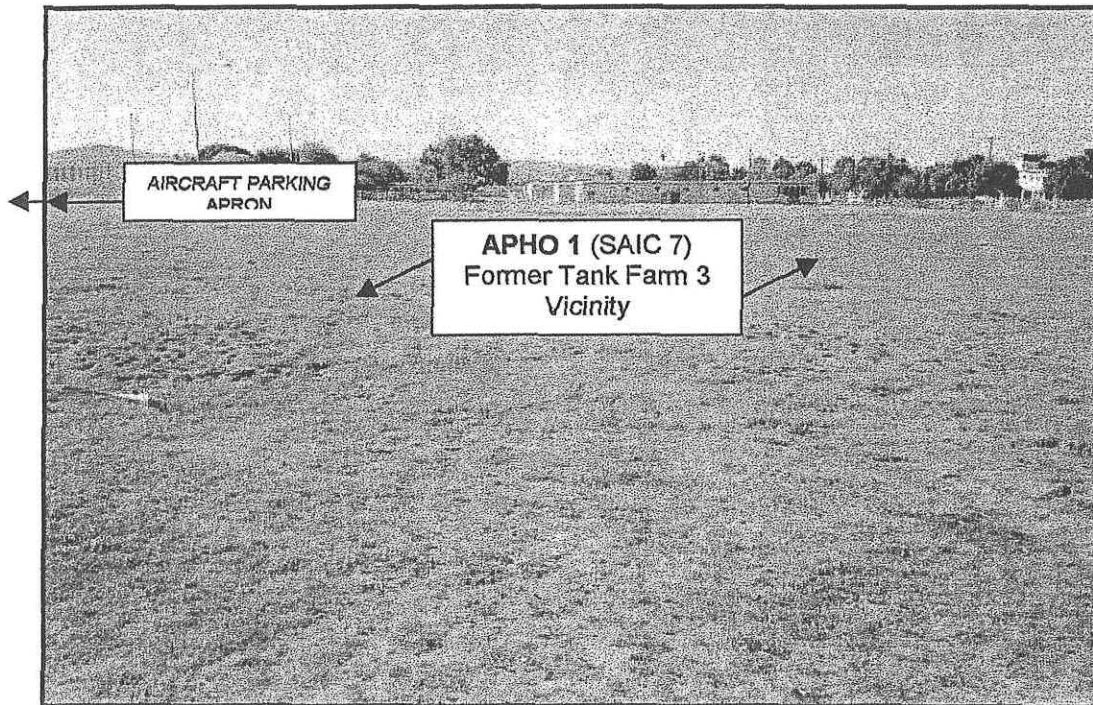
**Photograph 2. APHO 1 (SAIC 7) Vicinity.
Stains (identified on 1946 aerial photograph).
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro**

Date of Photograph: 5 September 1999

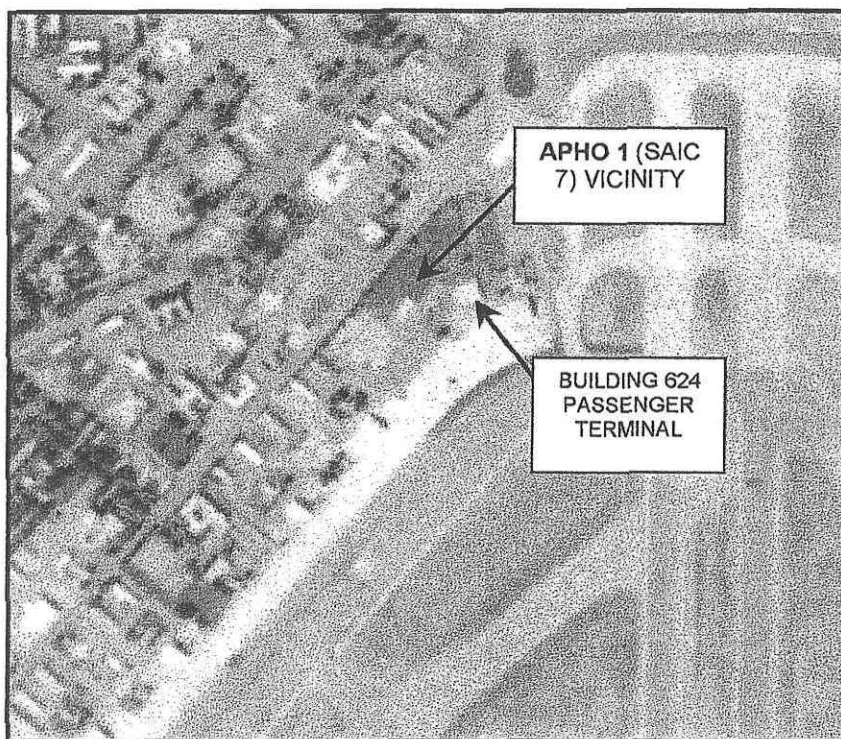


**Photograph 3. APHO 1 (SAIC 7) Vicinity.
Stains (identified on 1946 aerial photograph).
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro**

Date of Photograph: 19 December 1999



Photograph 4. APHO 1 (SAIC 7) Vicinity
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro
Date of Photograph: 1994



CHECK LIST

Aerial Photograph Anomaly Program, Marine Corps Air Station, El Toro

Anomaly Identification Information:

Date of Photograph: 29 December 1946

APHO (from the BRAC Cleanup Plan)	SAIC	EPA
1	7	

Recommendation: *No Further Action Status*

Anomaly Description (from source document(s) *Site Analysis, El Toro MCAS* (EPA, 1991) or *Final Report, Aerial Photograph Assessment* (SAIC, 1993)):

SAIC 7: *There are stains (ST) adjacent to the aircraft parking apron at N 6th Place and K Street and at N 4th Place and K Street. Additional investigation of these sites is recommended.*

Visual Inspection Date (s): *5 September 1999 (with APHO 41), 24 September (with APHO 16/APHO 34), and 19 December 1999*

Participant(s) (with affiliation(s)) in inspection(s): *Lynn Marie Hornecker (US Navy)*

Current Site Conditions: *APHO 1 (SAIC 7) is located within the boundary of the former Tank Farm 3. The site is relatively level and is covered with grass. No stained or discolored areas were observed during the site visits, and no items were being stored at the site during the site visits. Building 624 located northeast of the site was vacant at the time of the inspections.*

Is there visual evidence of the anomaly identified in the photograph present at the site?
No.

Is there evidence of past releases? *No.*

Are there indications of potential or current releases? *No.*

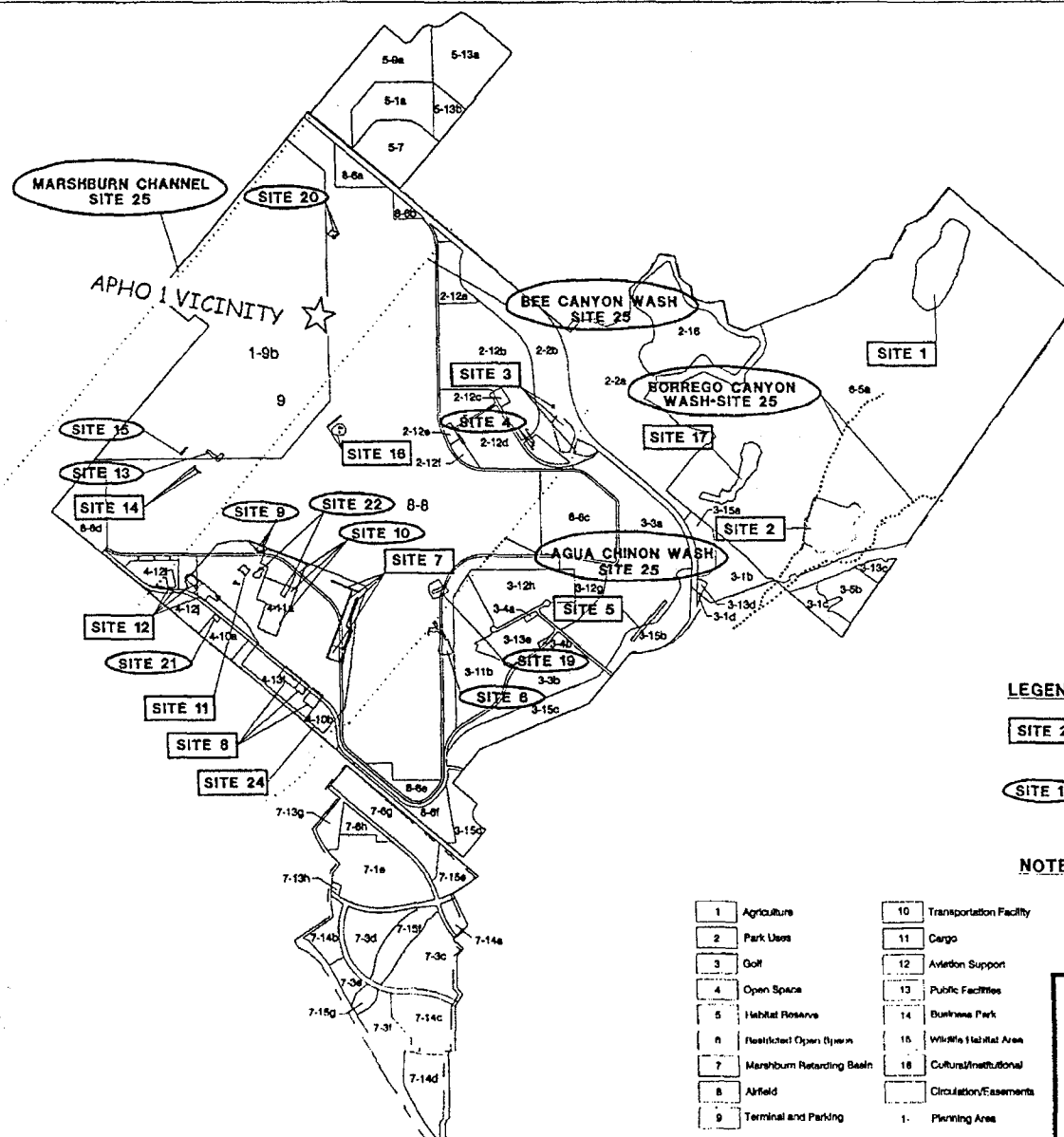
Description of photograph(s): *Photographs show the former Tank Farm 3 vicinity including APHO 1 (SAIC 7).*

Date of preparation of check list: *19 January 2000*

INSTALLATION RESTORATION PROGRAM SITES

SITE DESCRIPTION

1. EDD RANGE
2. MAGAZINE ROAD LANDFILL
3. ORIGINAL LANDFILL
4. FERRUCINE SPILL AREA
5. PERIMETER LANDFILL
6. DROP TANK DRAINAGE AREA NO. 1
7. DROP TANK DRAINAGE AREA NO. 2
8. DRUG STORAGE AREA
9. CRASH CREW PIT NO. 1
10. PETROLEUM DISPOSAL AREA
11. TRANSFORMER STORAGE AREA
12. SLUDGE DRYING BEDS
13. OIL CHANGE AREA
14. BATTERY ACID DISPOSAL AREA
15. SUSPENDED FUEL TANKS
16. CRASH CREW PIT NO. 2
17. COMMUNICATION STATION LANDFILL
18. GROUNDWATER
19. ACER SITE
20. NOBBY SHOP
21. MATERIALS MANAGEMENT GROUP
22. TACTICAL AIR FUEL DISPENSING SYSTEM
23. VOLATILE ORGANIC COMPOUND (VOC) SOURCE AREA
24. MAJOR DRAINAGES



LEGEND

SITE 2 REQUIRE ACTION SITE

SITE 19 NO FURTHER ACTION SITE (AS OF SEPTEMBER 1997)

NOTE: SITE 18, REGIONAL GROUNDWATER PLUME IS OFF STATION TO THE WEST

1 Agriculture	10 Transportation Facility
2 Park Uses	11 Cargo
3 Golf	12 Aviation Support
4 Open Space	13 Public Facilities
5 Habitat Reserve	14 Business Park
6 Restricted Open Space	15 Wildlife Habitat Area
7 Marshburn Retarding Basin	16 Cultural/Institutional
8 Airfield	17 Circulation/Easements
9 Terminal and Parking	18 Planning Area

Exhibit 1.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

Preferred Land Use Plan

The Airport and Open Space Plan, Concept B

MARINE CORPS AIR STATION, EL TORO

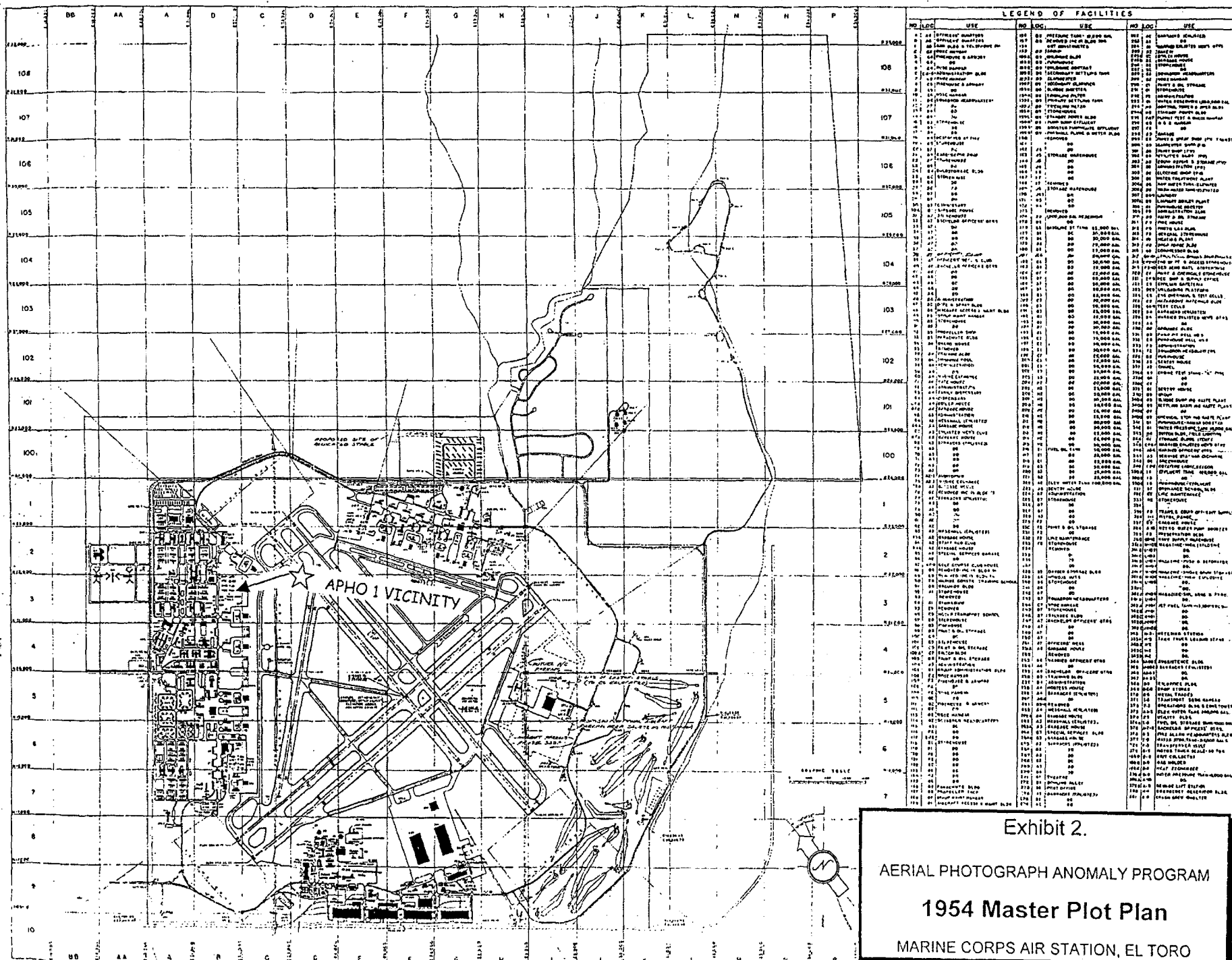
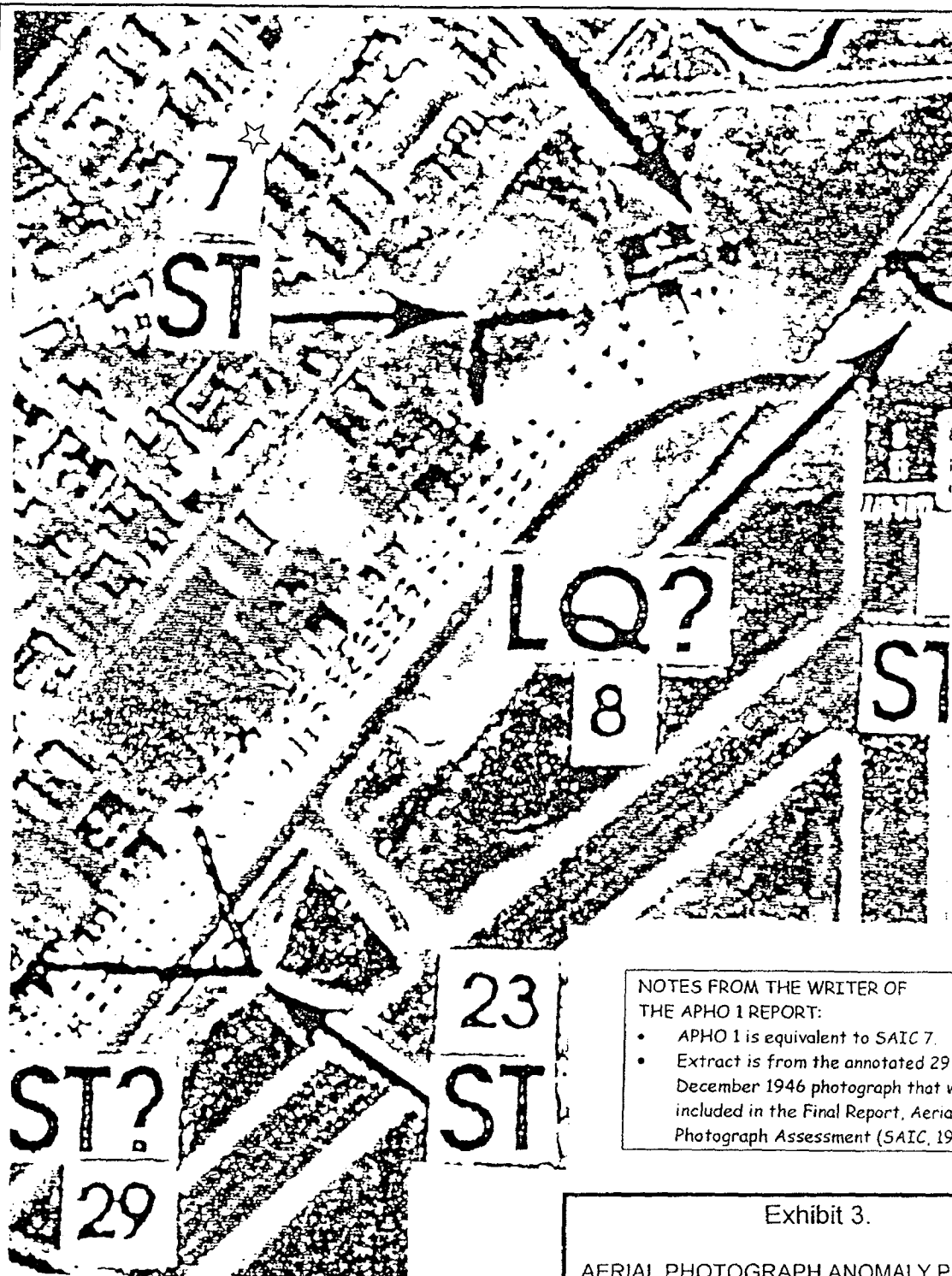


Exhibit 2.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

1954 Master Plot Plan

MARINE CORPS AIR STATION, EL TORO



NOTE: ANNOTATIONS MADE BY THE WRITER OF THE APHO 1 REPORT ARE IDENTIFIED WITH AN ARROW OR A STAR SYMBOL: ☆

NOTES FROM THE WRITER OF THE APHO 1 REPORT: ☆

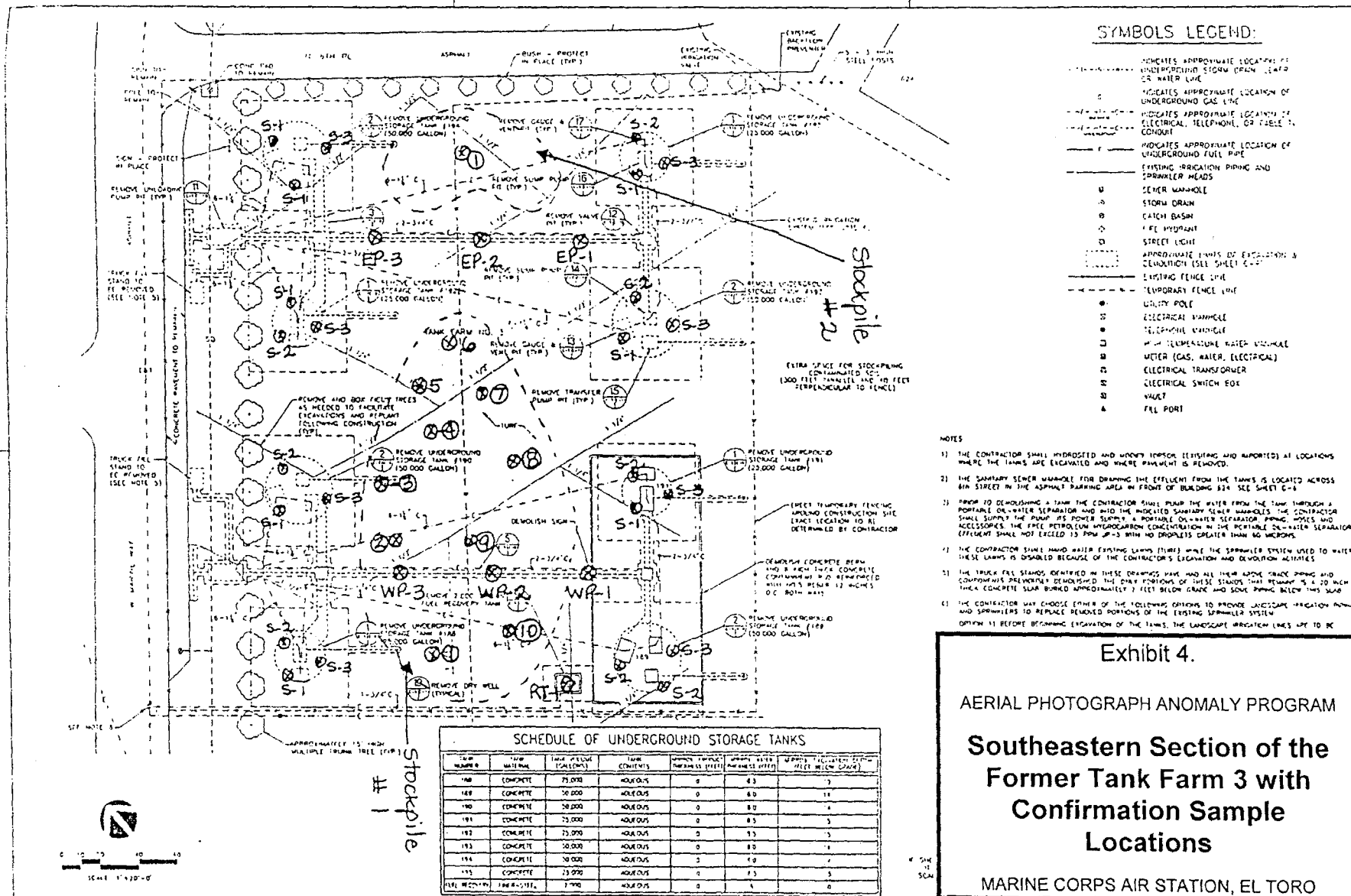
- APHO 1 is equivalent to SAIC 7.
- Extract is from the annotated 29 December 1946 photograph that was included in the Final Report, Aerial Photograph Assessment (SAIC, 1993)

Exhibit 3.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

Extract from Aerial Photograph of 1946

MARINE CORPS AIR STATION, EL TORO



United States Marine Corps

Base Realignment and Closure Cleanup Plan (BCP)



EXTRACTS

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 1 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆

**For
Marine Corps Air Station
El Toro, CA**

March 1999

Table 3-1a
Site Summary
(Sheet 3 of 34)

Seq No.	Database Tracking	LRA Reuse Parcel	Description	Material Disposed	Date of Operation	Status	Risk to Human Health and the Environment [†]	Regulatory Mechanism	NFA	Comments	ECP Area Type*
24	IRP 25	NA	Major Drainages (OU-2A)	Four drainage channels that flow through or adjacent to the Station and receive storm water discharges from the Station.		ROD signed in September 1997.		FFA	X	Includes SWMUs/AOCs 3, 4, 5, and 11	3
25	APHO 1	32	Stain							See Table 3-2	7
26	APHO 2	42	Open storage, drum							See Table 3-2	7
27	APHO 3	43	Open storage, drum							See Table 3-2	7
28	APHO 4	23	Stain							See Table 3-2	7
29	APHO 5	32	Open storage							See Table 3-2	7
30	APHO 6	29	Impoundment							See Table 3-2	7
31	APHO 7	29	Wet soil, stain, open storage							See Table 3-2	7
32	APHO 8	7	Open storage, refuse, excavation, fill area							See Table 3-2	7
33	APHO 9	23	Liquid							See Table 3-2	7
34	APHO 10	23	Open storage							See Table 3-2	7
35	APHO 11	29	Trench, disturbed ground							See Table 3-2	7
36	APHO 12	8	Wet soil							See Table 3-2	7
37	APHO 13	40	Drum							See Table 3-2	7
38	APHO 14	40	Stain, wet soil							See Table 3-2	7
39	APHO 15	32	Stain							See Table 3-2	7
40	APHO 16	32	Wet soil, liquid							See Table 3-2	7
41	APHO 17	29	Stain							See Table 3-2	7
42	APHO 18	29	Stain							See Table 3-2	7
43	APHO 19	29	Stain, liquid							See Table 3-2	7
44	APHO 20	7	Excavation, liquid							See Table 3-2	7
45	APHO 21	7	Open storage, drum							See Table 3-2	7
46	APHO 22	32	Stain, Drum							See Table 3-2	7
47	APHO 23	32	Fuel bladder revetment, stain							See Table 3-2	7
48	APHO 24	23	Extraction							See Table 3-2	7
49	APHO 25	40	Mounded material, refuse							See Table 3-2	7
50	APHO 26	23	Excavation, liquid							See Table 3-2	7
51	APHO 27	32	Stain, wet soil							See Table 3-2	7
52	APHO 28	42	Liquid							See Table 3-2	7
53	APHO 29	32	Wet soil, liquid							See Table 3-2	7
54	APHO 30	35	Unidentified object							See Table 3-2	7

Table 3-2
Aerial Photograph Features/Anomalies
 (Sheet 1 of 7)

Database Tracking	SAIC Anomaly ID No.	LRA Reuse Parcel	Point of Reference	Year	SAIC Observations ¹	SAIC Comments ²	Comments	ECP Area Type
→ APHO 1	7	32	Tank Farm 3	1946	ST	C	The stains appear adjacent to the southeastern side of Tank Farm 3 where a former fuel bladder may have been located. Also see anomalies 113, 173, 190, 227, 235, and 272.	7
APHO 2	14	42	B 136	1946	OS, D	C	Miscellaneous equipment is stored along the southeast side of B 135. The ground surface is paved with asphalt, and surface runoff flows in a southwest direction.	7
APHO 3	21	43	B 120	1946	OS, D	C	Miscellaneous equipment is stored along the southeast side of B 120. The ground surface is paved with asphalt, and surface runoff flows in a southwest direction.	7
APHO 4	22	23	Tank Farm 4	1946	ST	C	Miscellaneous equipment is stored along all sides of this building. Portions of the ground surface along the east and west sides of the building are unpaved. Surface runoff flows in a southwesterly direction.	7
APHO 5	25	32	B 50	1946	OS	C	This area is commonly used for open storage. The ground surface is unpaved.	7
APHO 6	39	29	B 306	1946	IM	C	Unknown impoundments. Additional investigation recommended.	7
APHO 7	46	29	B 1389	1946	WS, ST, OS	C	The liquid is probably surface runoff.	7
APHO 8	52	7	Golf Course Hole 12	1946	OS, R, EX, FA	C	Portions of this storage area has been covered by the extension of runways 34-L and 34-R.	7
APHO 9	53	23	Agua Chinon Wash	1946	LQ	C	The liquid could be surface runoff flowing into Agua Chinon Wash.	7

11-00050 000195

EXTRACTS

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 1 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆

Final Report
Aerial Photograph Assessment
MCAS El Toro
Contract No. N68711-91-D-4658
Delivery Order 0002
SAIC Project No. 01-0892-02-0817

Submitted to:

Naval Facilities Engineering Command
Southwest Division
1220 Pacific Highway, Room 18
San Diego, CA 92132-5181

Submitted by:

Science Applications International Corporation
Engineering Sciences Division
10260 Campus Point Drive, MS F1
San Diego, CA 92121

October 25, 1993

GS-CP

1946

Figure 2

Sheet 1 of 1

December 29, 1946

Photo Number GS-CP-8-100

Source:

U.S. Geological Survey

Prepared for:

Southwest Division

Naval Facilities Engineering Command


Contract N68711-92-D-4658

LEGEND:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
B	Building	IM	Impoundment
D	Drums	LQ	Liquid
DB	Debris	LT	Light-Toned
DG	Disturbed Ground	M	Material
DK	Dark-Toned	MM	Mounded Material
EX	Excavation	OS	Open Storage
EXT	Extraction	R	Refuse
FA	Fill Area	ST	Stain
FBR	Fuel Bladder	TR	Trench
	Revetment	UO	Unidentified Object
GR	Graded Area	VT	Vertical Tank
GS	Ground Scar	WS	Wet Soil
HT	Horizontal Tank		



2000' 0 2000' 4000'

$$1'' = 2000'$$


Science Applications
International Corporation
® An Employee-Owned Company

2.1 1946 PHOTOGRAPHS

FIGURE: 2
DATE: 29 DECEMBER 1946
PHOTOGRAPH: GS-CP-8-100

- c 1. An excavation (EX) about 400 feet wide by 500 feet long is noted beneath the present threshold area of Runway 16L. The purpose of the excavation is unknown, but may be an early, undocumented disposal area. The site history, or the site itself, should be investigated to determine if potential contaminants were disposed of in the excavation.
- c 2. A fill area (FA) is located immediately west of the excavation (EX) discussed in the previous comment. The area appears to contain spoil material from the excavation. No additional investigation of the fill material is recommended at this time.
- c 3. A circular graded (GR) area about 300 feet in diameter is located near the present Auto Hobby Shop (Building 625). Along the western border of the area is a dark-toned mound (MMDT) of unknown composition, but may be soil and vegetation debris from the grading. No additional investigation is recommended at this time.
- c 4. Farm buildings (B) and a possible excavation (EX) are located on Irvine Boulevard, north of the activity. The buildings may contain fuel, solvents, pesticides, fertilizers, and other potential contaminants; the excavation may have been used to dispose of these materials. No additional investigation is recommended at this time, unless contamination is detected near, or downgradient of the site, in areas of interest to the IR program.
- c 5. A vertical tank (VT) is noted at N 6th Street and D Street. This is probably Building 222 (Elevated Water Tank). No additional investigation is recommended at this time.
- c 6. There is an excavation (EX) at the present intersection of N 7th Place and K Street. There appears to be wet soil (WS) or liquid (LQ) extending into the excavation from a light-colored building at the edge of the aircraft parking apron. The site should be investigated for past use as a possible disposal area.
- c 7. There are stains (ST) adjacent to the aircraft parking apron at N 6th Place and K Street, and at N 4th Place and K Street. Additional investigation of these sites is recommended.
- c 8. A drainage channel (EX) with probable liquid (LQ) extends from the aircraft parking apron near the approach end of Runway 21 and into a drainage ditch near the approach end of Runway 16R. The channel probably controls runoff from the apron area, and may convey contaminated water. Additional investigation is recommended.

**STORM WATER POLLUTION PREVENTION PLAN
(SWPPP)**

EXTRACTS

FOR

**MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA**

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 1 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆

**CONTRACT NO. N68711-96-D-2059
DELIVERY ORDER NO. 0002**

VOLUME 1

JULY, 1997

INTEGRATED ENVIRONMENTAL MANAGEMENT, INC.

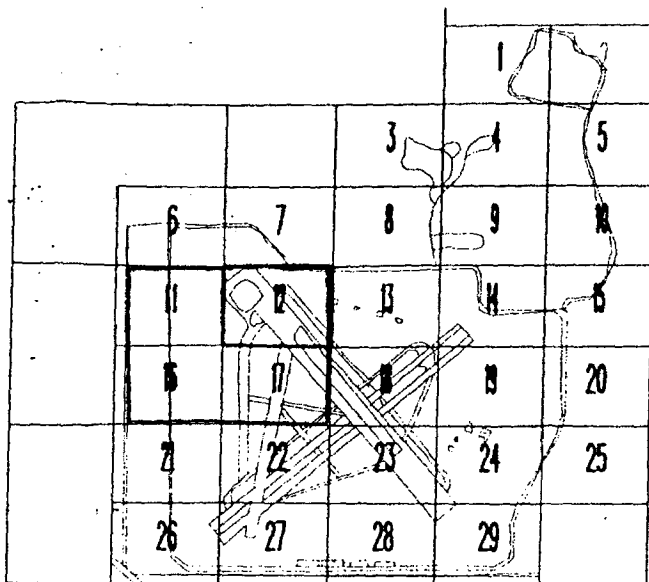
TABLE 7-1 MCAS EL TORO MATERIALS INVENTORY								
BLDG #	BASIN	BUILDING DESCRIPTION	TENANT	Concern Level	TRADE/COMMON NAME	MAX. DAY	AVE. Day	CONT.
606	07	Maint Hngr Space	HMM-163	Concern	Thinner	N/A	N/A	N/A
606	07	Maint Hngr Space	HMM-163	Concern	Waste Oil	N/A	N/A	N/A
610	08	Tank - Fuel Farm			Diesel Fuel No. 2	200 gal	100 gal	200 gal
619	37	Tank -MWR Golf course	Installation	Concern	Diesel Fuel No. 2	1000 gal	500 gal	1500 gal
625	28	Hobby Shop/Automotive	MWR-Rec	Concern	Antifreeze	N/A	N/A	N/A
625	28	Hobby Shop/Automotive	MWR-Rec	Concern	Gasoline	N/A	N/A	N/A
625	28	Hobby Shop/Automotive	MWR-Rec	Concern	Paint	N/A	N/A	N/A
625	28	Hobby Shop/Automotive	MWR-Rec	Concern	Waste Oil	N/A	N/A	N/A
626	28	Hobby Shop/Automotive	MWR-Rec	Concern	Cleaning compound	60 gal	25 gal	1 gal
634	08	Maint Hanger Space	MALS-11	Concern	Fuel	N/A	N/A	55 gal
637 - 3	08	Tank - Exchange Gas Station	MWR	Concern	Gasoline - Unleaded Regular	8000 gal	5000 gal	12000 gal
634	08	Maint Hanger Space	MALS-11	Concern	Hydraulic Fluid	N/A	N/A	55 gal
634	08	Maint Hanger Space	MALS-11	Concern	Lubricating Oil	N/A	N/A	55 gal
634	08	Maint Hanger Space	MALS-11	Concern	Solvents	N/A	N/A	55 gal
634	08	Maint Hanger Space	MALS-11	Concern	Waste Oil	N/A	N/A	55 gal
637 - 2	08	Tank - Exchange Gas Station	MWR	Concern	Gasoline - Unleaded Mid Grade	9000 gal	5000 gal	12000 gal

NOTE:
BUILDING 624 (NEAR APHO 1)
IS NOT IDENTIFIED AS A HW
OR HM STORAGE AREA.

TABLE 6-1
MCAS EL TORO

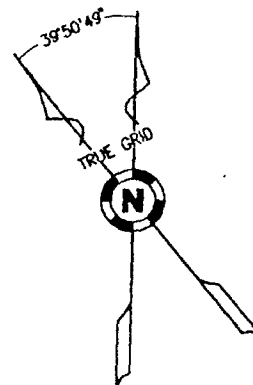
STATIONWIDE SUMMARY OF BMPs

BLDG #	BASIN	BUILDING DESCRIPTION	TENANT	Concern Level	BMP STATUS	BMP #	BMP Description
612	30	Not Listed		Limited			No Additional BMPs Recommended
613	30	Not Listed		Limited			No Additional BMPs Recommended
614	30	Aqua Chinon Playground	Housing	Limited			No Additional BMPs Recommended
615	14	Handball Courts	MWR-Rec	Limited			No Additional BMPs Recommended
616	01	Administration Office	Installation	Limited			No Additional BMPs are Recommended
619	37	Standby Generator Building	Installation	Concern	Rec	032	Dispose of Surplus Material or Store Under Cover
624	17	Air Terminal Administration	Station/G-3 Station/G-3	Limited			No Additional BMPs are Recommended
625	28	Hobby Shop/Automotive	MWR-Rec	Concern	Existing	009	Personnel Training
					Existing	112	Prepare Appropriate Spill Prevention and Response Plans
					Rec	012	Construct Berm or Dike Around Critical Areas
					Rec	016	Store Waste and Recycling Materials in Proper Containers
					Rec	110	Regularly Inspect and Maintain Storm Water Conveyance System
					Rec	044	Use Drip Pans under Leaking Equipment
					Existing	065	Place Spill Kit in Area
626	28	Hobby	MWR-Rec	Concern	Existing	009	Personnel Training



KEY PLAN

SCALE: NONE



1" = 150'-0"



IF SHEET IS LESS THAN 22X34 IT IS A REDUCED PRINT SCALE ACCORDINGLY

IEM INTEGRATED ENVIRONMENTAL MANAGEMENT, INC.

3002 DOW AVENUE • SUITE 412 • TUSTIN, CALIFORNIA 92680

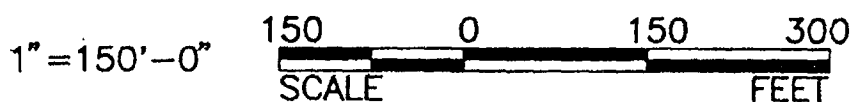
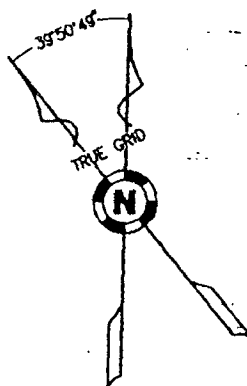
(714) 731-5977 • (714) 731-5976

PROJECT NO.			DEPARTMENT OF THE NAVY			NAVAL FACILITIES ENGINEERING COMMAND		
			EL TORO			SOUTHWEST DIVISION		
			MARINE CORPS AIR STATION			CALIFORNIA		
						EL TORO, CA.		
DSGN.			DR.			CHK.		
SUPV.			CH. ENGR.					
SUBMITTED BY			DATE					
FIRM MEMBER (TITLE)								
DM			BM			FP		
DIV. MGR.			DIR.					
SATISFACTORY TO			DATE					
TITLE								
APPROVED			DATE					
			SIZE			CODE IDENT. NO.		
			D					
						NAVFAC. DRAWING NO.		
						CONT. CONTR. NO.		
						XXXXX		
						SHEET		
						OF		



KEY PLAN

SCALE: NONE



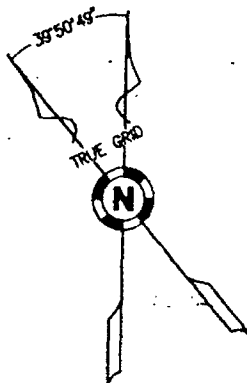
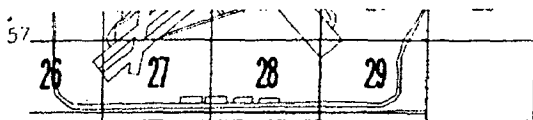
LESS THAN 22X34 IT IS A REDUCED PRINT SCALE ACCORDINGLY

IEM
ED ENVIRONMENTAL MANAGEMENT, INC.

412 • TUSTIN, CALIFORNIA 92680

(714) 731-5977 • (714) 731-5976

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
EL TORO		CALIFORNIA	
CHK.	MARINE CORPS AIR STATION		EL TORO, CA.
DATE	"MCAS" EL TORO		
FP	AREA 11 - STORM DRAINS		
DATE	SIZE	CODE IDENT. NO.	NAVFAC. DRAWING NO.
	D		
DATE	CONT. CONTR. NO.		XXXXX
NAVFAC	SCALE	SPEC.	SHEET OF



KEY PLAN

SCALE: NONE

1" = 150'-0"

150 0 150 300

SCALE FEET

THAN 22X34 IT IS A REDUCED PRINT SCALE ACCORDINGLY

IEM
ENVIRONMENTAL MANAGEMENT, INC.

TUSTIN, CALIFORNIA 92680

(714) 731-5877 • (714) 731-5878

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

SOUTHWEST DIVISION

EL TORO

CALIFORNIA

MARINE CORPS AIR STATION

EL TORO, CA.

"MCAS" EL TORO

AREA 16 - STORM DRAINS

SIZE

CODE IDENT. NO.

NAVFAC. DRAWING NO.

D

CONT. CONTR. NO.

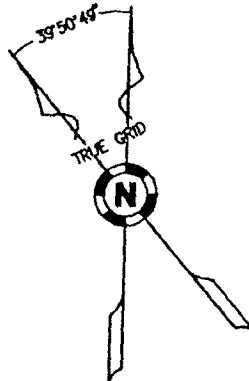
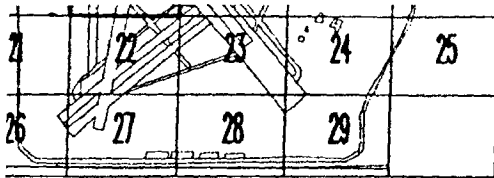
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SCALE

*SPEC.

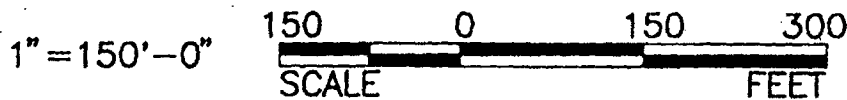
SHEET

OF



KEY PLAN

SCALE: NONE



THAN 22X34 IT IS A REDUCED PRINT SCALE ACCORDINGLY

IEM
ENVIRONMENTAL MANAGEMENT, INC.

MUSTIN, CALIFORNIA 92680

(714) 731-5977 • (714) 731-5976

DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
EL TORO		CALIFORNIA	
MARINE CORPS AIR STATION		EL TORO, CA.	
"MCAS" EL TORO			
AREA 17 - STORM DRAINS			
SIZE	CODE IDENT. NO.	NAVFAC. DRAWING NO.	
D			
		CONT. CONTR. NO.	XXXXX
SCALE		SPEC.	SHEET OF

Final

Marine Corps Air Station El Toro
Hazardous Material/Hazardous Waste
Management Plan

August 1994

EXTRACTS

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 1 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆



Prepared for:

Southwest Division Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, CA 92132-5190

Prepared by:

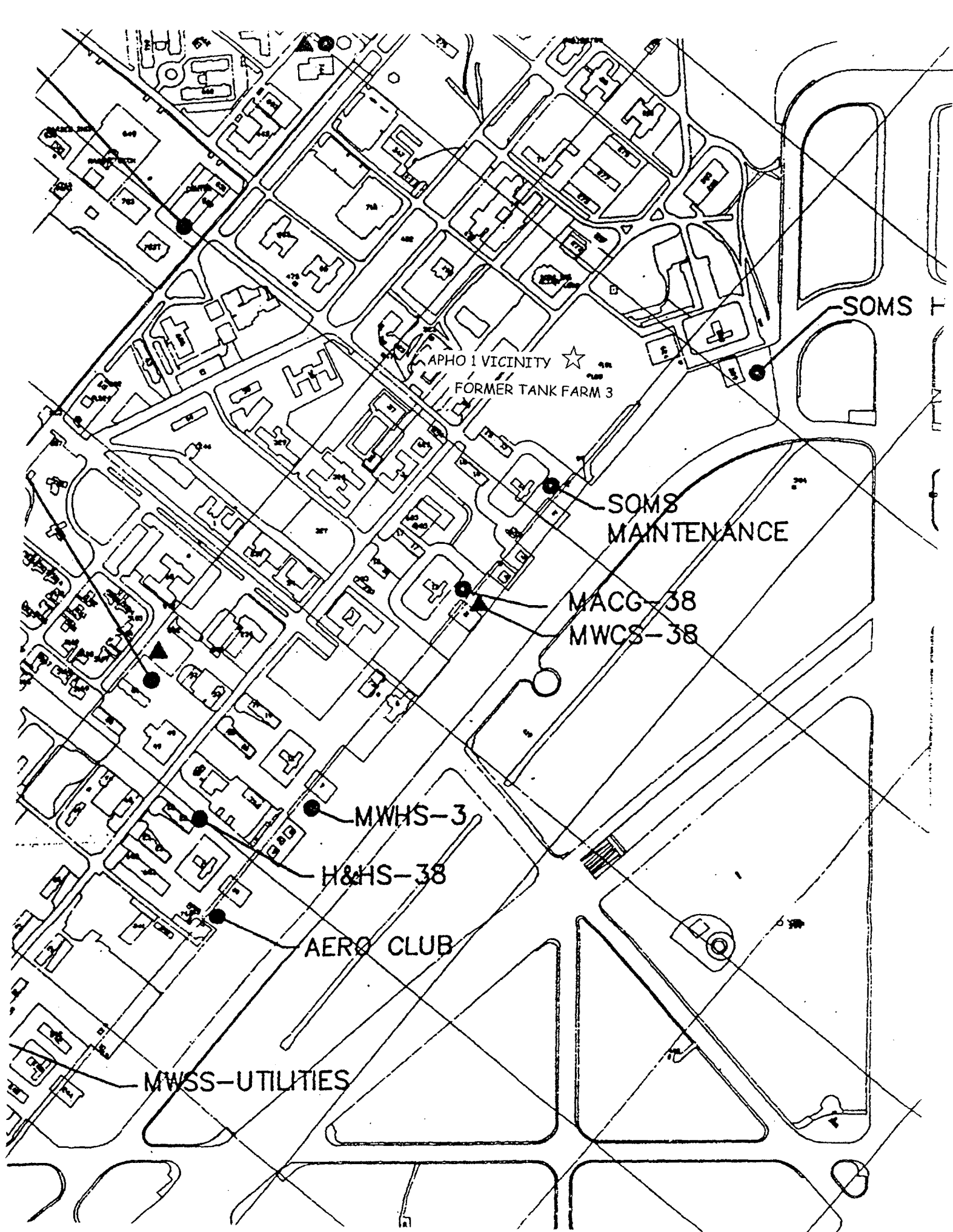
Science Applications International Corporation
Engineering Sciences Division
10260 Campus Point Drive
San Diego, CA 92121

Contract No. N68711-92-D-4658
Delivery Order No. 0004

Hazardous Waste Accumulation Point Summary		
Unit	Bldg #	Coordinates
Aero Club	10	R5
Armory	744	O2
Auto Hobby Shop	626	M3
CSSD-14	388	U8
Environmental Above Ground Storage Tank	n/a	U6
FMD Shops, Bldg 1601	370	T6
Fuels Division	314	U9
H&HS 38	22	R4
MACG-38 MWCS 38	HGR 5	R4
MAG-46	51	Q4
MAG-46 Fixed Wing	296	T9
MAG-46 Helo Mals-46	295	S8
MALS-11 Air Frames	130	M9
MALS-11 Avionics	656	Q12
MALS-11 Cryogenics (ALSS)	636	R12
MALS-11 GSE North	392	M9
MALS-11 Ordnance	673	P12
MALS-11 Power Plant	658	N10
MALS-11 Power Plant	634	N9
MALS-11 Supply	441	P12
Maytag Aircraft Corp	779	N10
MOD Team	115	N9
Motor Pool (G-4), Bldg 770	386	T7
MWHS-3	7	Q5
MWR Auto #1	651	O2
MWR Golf Course	390	P13
MWSS-Utilities	31	S4
MWSS-373 HQ	800	U10
MWSS-373 Refuelers	671	U9
SOMS HQ	289	N5
SOMS Maintenance	HGR 2	O4
SOMS Recovery		
Supply	320	U7
VMFA (AW)-121	462	R11
VMFA (AW) 225	698	N9
VMFA (AW)-242	461	R11
VMFAT-101	371	Q10
VMFA-323	606	N8
VMGR-352	297	T8
VFMA-314	605	N7



NOTE: No hazardous waste accumulation areas are identified at APO 1.



SOMS

APHO 1 VICINITY ★
FORMER TANK FARM 3

SOMS
MAINTENANCE

MACG-38
MWCS-38

MWHS-3

H&HS-38

AERO CLUB

MWSS-UTILITIES

No Further Action Decision Documents for Nearby Environmental Locations of Concern (LOCs) and Groundwater Information



**COUNTY OF ORANGE
HEALTH CARE AGENCY**

**PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH**

TOM URAM
DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

ROBERT E. MERRYMAN, REHS, MPH
DEPUTY DIRECTOR

MAILING ADDRESS:
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705 4730

TELEPHONE: (714) 667-3600
FAX: (714) 912-0749

November 13, 1996

LT Hope Katcharian
Director, Environmental Engineering Division
Commanding General
AC/S Environmental 1AU
Marine Corps Air Station El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001

Subject: Completion of Tank Removal Project

RE: Marine Corps Air Station El Toro
Fuel Farm #3
(Tanks #188, 189, 190, 191, 192, 193, 194, 195, 219, 220, 221 and a recovery [tank])
Santa Ana, CA 92709

Dear Lt. Katcharian:

This is in response to your request for a confirmation of the completion of the tank removal project. With the provision that the results for the soil samples obtained during the tank removal on September 13, 1996, were accurate and representative of existing conditions, it is the position of this office that no significant soil contamination has occurred at the above noted facility location.

It should be pointed out that this letter does not relieve you of any responsibilities mandated under the California Health and Safety Code if additional or previously unidentified contamination is discovered at the subject site.

If you have any questions regarding this matter, please contact Arghavan Rashidi-Fard at (714) 667-3713.

Sincerely,

William J. Diekmann, M.S., REHS
Supervising Hazardous Waste Specialist
Hazardous Materials Management Section
Environmental Health Division

cc: Larry Vitale, Santa Ana Regional Water Quality Control Board



**COUNTY OF ORANGE
HEALTH CARE AGENCY**

**PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH**

TOM URAM

DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

ROBERT E. MERRYMAN, REHS, MPH
DEPUTY DIRECTOR

MAILING ADDRESS
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE: (714) 667-3600
FAX: (714) 972-0749

December 2, 1996

LT. Hope Katcharian
Director, Environmental Engineering Division
Commanding General
AC/S Environmental IAU
Marine Corps Air Station El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001

Subject: **Completion of Tank Removal Project**

RE: Marine Corps Air Station El Toro
Tank #288
Santa Ana, CA 92709

Dear Lt. Katcharian:

This is in response to your request for a confirmation of the completion of the tank removal project. With the provision that the results for the soil samples obtained during the soil sampling activities on October 15, 1993, were accurate and representative of existing conditions, it is the position of this office that no significant soil contamination has occurred at the above noted tank location.

It should be pointed out that this letter does not relieve you of any responsibilities mandated under the California Health and Safety Code if additional or previously unidentified contamination is discovered at the subject site.

If you have any questions regarding this matter, please contact Arghavan Rashidi-Fard at (714) 667-3713.

Sincerely,

William J. Diekmann, M.S., REHS
Supervising Hazardous Waste Specialist
Hazardous Materials Management Section
Environmental Health Division

cc: Larry Vitale, Santa Ana Regional Water Quality Control Board



Department of Toxic Substances Control



Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

DEC 22 10 56 AM '99

BRAC OFFICE

Gray Davis
Governor

December 20, 1999

Mr. Dean Gould
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P.O. Box 51718
Irvine, California 92619-1718

SUMMARY REPORT FOR AERIAL PHOTOGRAPH ANOMALIES APHO 16 AND APHO 34, MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) reviewed the above report dated October 22, 1999 and received by this office on October 28, 1999. The report presents the results of the record search activities and visual inspection of APHO 16 (also referenced as Science Applications International Corporation (SAIC) 115) and APHO 34 (SAIC 235). APHO 16 was identified on an aerial photograph dated June 28, 1960 and was described as probable wet soil or liquid flowing from the open storage area on the northeast side of North 4th Place. APHO 34 was identified on an aerial photograph dated March 14, 1973 and was described as a stained area and two unidentified objects on the northerly side of Building 15, near West Marine Way and North 4th Place. Since APHO 16 and APHO 34 are located in close proximity to each other, the areas were combined and record search activities and visual inspection were conducted for the APHO 16/34 vicinity.

The report recommends a no further action status for APHO 16 and APHO 34 based on evaluation of field inspection results, environmental program documents, and historical property records. Evidence of wet soils, liquids, stains, stored items, unidentified objects, or aboveground tanks were not observed during the visual site inspection of conducted by the Navy on September 24 and October 10, 1999. Evidence of prior use of the APHO 16/34 area for storage of hazardous substances was not found during review of environmental program documents and historical property records.

Mr. Dean Gould
December 20, 1999
Page 2

Additionally, the report recommends that the comments for APHO 16 in Table 3-2 in the *Base Realignment and Closure (BRAC) Cleanup Plan (BCP)* be revised to correlate to the description provided in the *SAIC Final Report, Aerial Photograph Assessment, MCAS El Toro (Final Report)* as follows: "APHO 16, identified on a 1960 photograph as SAIC 115, is described as probable wet soil and liquid in the former open storage area northeast of North 4th Place." The report also recommends that the comments for APHO 34 be revised as follows: "APHO 34, identified on a 1973 photograph as SAIC 235, is described as a stained area and two unidentified objects, possibly vertical tanks, north of Building 15." Based on clarification provided by the Navy, DTSC understands that these revisions are necessary to correct previous transcription errors from the SAIC Final Report to the BCP.

Based on review of the summary report, DTSC concurs with the proposed no further action status designation and comment revision for APHO 16 and APHO 34. The no further action status and revised comment in Table 3-2 must be documented in the next BCP update.

If you have any questions, please contact me at (714) 484-5395.

Sincerely,



Triss M. Chesney, P.E.
Remedial Project Manager
Southern California Branch
Office of Military Facilities

cc: Mr. Glenn Kistner
Remedial Project Manager
U. S. Environmental Protection Agency Region IX
Superfund Division (SFD-8-2)
75 Hawthorne Street
San Francisco, California 94105-3901

Ms. Patricia Hannon
Remedial Project Manager
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Mr. Dean Gould
December 20, 1999
Page 3

cc: Mr. Gregory F. Hurley
Restoration Advisory Board Co-chair
620 Newport Center Drive, Suite 450
Newport Beach, California 92660-8019

Ms. Polin Modanlou
MCAS El Toro Local Redevelopment Authority
10 Civic Center Plaza, 2nd Floor
Santa Ana, California 92703

Ms. Lynn Hornecker
Remedial Project Manager
Naval Facilities Engineering Command
Southwest Division - Code 5BME.LH
1220 Pacific Highway
San Diego, California 92132-5187



Winston H. Hickox
Secretary for
Environmental
Protection

Department of Toxic Substances Control

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

October 18, 1999



Gray Davis
Governor

Mr. Dean Gould
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P. O. Box 51718
Irvine, California 92619-1718

SUMMARY REPORT FOR AERIAL PHOTOGRAPH ANOMALY (APHO) 41, MARINE CORPS AIR STATION (MCAS) EI TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) has reviewed the above report dated September 22, 1999. The report presents the results of the record search activities and a visual inspection of APHO 41 (Also known as Science Applications International Corporation (SAIC) 272). The anomaly is described as stains or wet soil on the southwest side of Building 624 that may have originated from Building 624. APHO 41 is located northeast of the former Tank Farm 3 and adjacent to the southwest end of Building 624. APHO 41 was identified on an aerial photograph dated December 9, 1974.

The report recommends a no further action status for APHO 41 based on evaluation of historical aerial photographs, Station maps and plans, Station property records, environmental program management plans, the results of previous environmental restoration program investigations, and a visual site inspection conducted in September 1999.

The visual site inspection by the Navy found no stains or wet soils on the unpaved areas of APHO 41 and no stains on the parking areas and access roads adjacent to Building 624. Review of historical records do not show evidence of storage of hazardous materials or wastes at or near APHO 41 and environmental investigations have taken place in the vicinity of APHO 41. The stains or wet soils in the 1974 photograph may have been caused by surface runoff from storm water, runoff from irrigation of shrubs and trees at the southwest end of Building 624, or runoff from the roof of Building 624.

Based on our review of the documentation presented, DTSC concurs with the proposed no further action status designation for APHO 41. The no further action status can be documented in the next BRAC Cleanup Plan update.

Mr. Dean Gould
October 18, 1999
Page 2

If you have any questions, please contact me at (714) 484-5429.

Sincerely,



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Technical Memorandum

EXTRACTS

*Groundwater Monitoring Report
Petroleum Storage Facilities at Various Locations
Marine Corps Air Station
El Toro, California*

SWDIV Contract No. N68711-93-D-1459, Delivery Order No. 0050

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**OHM Remediation
Services Corp.**

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Table 2-2
Water Level Measurements and Groundwater Elevations
MCAS El Toro, Santa Ana, California

Well Number	Date Measured	Screen Interval (feet bgs)	Depth to Water (feet bgs)	TOC Elevation (feet msl)	Ground Surface Elevation (feet msl)	Water Elevation (feet msl)
TF2MW-02	16-May-96	115-155	127.75	278.80	279.53	151.05
	30-Aug-96		127.35	278.80	279.53	151.45
	13-Dec-96		127.75	278.80	279.53	151.05
	28-Jan-97		127.24	278.80	279.53	151.56
	31-Dec-96		127.60	278.80	279.53	151.20
	28-Mar-97		128.68	278.80	279.53	150.12
	19-May-97		126.46	278.80	279.53	152.34
TF2MW-03	20-May-96	120-160	128.20	279.67	280.32	151.47
	13-Dec-96		129.44	279.67	280.32	150.23
	24-Dec-96		129.15	279.67	280.32	150.52
	10-Jan-97		128.80	279.67	280.32	150.87
	28-Mar-97		128.12	279.67	280.32	151.55
	19-May-97		128.22	279.67	280.32	151.45
TF2MW-04	24-May-96	120-160	129.15	280.88	281.42	151.73
	30-Aug-96		132.32	280.88	281.42	148.56
	13-Dec-96		129.65	280.88	281.42	151.23
	13-Jan-97		129.20	280.88	281.42	151.68
	28-Mar-97		128.66	280.88	281.42	152.22
	19-May-97		128.64	280.88	281.42	152.24
13_UGMW32 GS	3-Sep-96	144-184	133.88	285.25	285.40	151.37
	13-Dec-96		133.73	285.25	285.40	151.52
	27-Dec-96		133.36	285.25	285.40	151.89
	28-Mar-97		132.73	285.25	285.40	152.52
	19-May-97		132.91	285.25	285.40	152.34
13_DBMW49	4-Sep-96	142-182	129.43	280.67	280.04	151.24
	13-Dec-96		128.58	280.67	280.04	152.09
	27-Dec-96		128.38	280.67	280.04	152.29
	28-Mar-97		128.03	280.67	280.04	152.64
	19-May-97		128.40	280.67	280.04	152.27
13_DGMW78 GS	4-Sep-96	127-167	125.00	276.16	276.42	151.16
	13-Dec-96		125.78	276.16	276.42	150.38
	10-Jan-97		125.06	276.16	276.42	151.10
	28-Mar-97		128.03	276.16	276.42	148.13
	19-May-97		128.40	276.16	276.42	147.76
15_DBMW51	5-Sep-96	125-165	119.80	269.45	269.79	149.65
	13-Dec-96		119.92	269.45	269.79	149.53
	20-Dec-96		119.68	269.45	269.79	149.77
	28-Mar-97		118.64	269.45	269.79	150.81
	19-May-97		118.85	269.45	269.79	150.60
→ TF3MW-01	31-Oct-96	169.5-209.5	178.47	332.86	333.45	154.39
	5-Nov-96		178.45	332.86	333.45	154.41
	13-Dec-96		177.88	332.86	333.45	154.98
	20-Jan-97		177.41	332.86	333.45	155.45
	28-Mar-97		176.75	332.86	333.45	156.11
	20-May-97		176.80	332.86	333.45	156.06

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→ TF3MW-02	13-Aug-96	159-199	165.95	318.38	319.36	152.43
	12-Sep-96		166.10	318.38	319.36	152.28
	13-Dec-96		166.02	318.38	319.36	152.36
	15-Jan-97		165.70	318.38	319.36	152.68
	28-Mar-97		164.77	318.38	319.36	153.61
	20-May-97		164.94	318.38	319.36	153.44
→ TF3MW-03	27-Aug-96	165.5-205.5	193.50	329.13	329.92	135.63
	18-Sep-96		175.60	329.13	329.92	153.53
	13-Dec-96		175.53	329.13	329.92	153.60
	15-Jan-97		175.33	329.13	329.92	153.80
	16-Jan-97		175.33	329.13	329.92	153.80
	28-Mar-97		174.34	329.13	329.92	154.79
	20-May-97		174.58	329.13	329.92	154.55
TF4MW-01	9-Sep-96	201-241	206.04	378.84	379.29	172.80
	27-Sep-96		205.91	378.84	379.29	172.93
	16-Dec-96		205.62	378.84	379.29	173.22
	31-Dec-96		205.29	378.84	379.29	173.55
	28-Mar-94		204.36	378.84	379.29	174.48
	20-May-97		204.02	378.84	379.29	174.82
TF4MW-02	16-Sep-96	201-241	210.80	384.97	385.27	174.17
	4-Oct-96		208.28	384.97	385.27	176.69
	16-Dec-96		209.20	384.97	385.27	175.77
	31-Dec-96		208.84	384.97	385.27	176.13
	28-Mar-97		208.11	384.97	385.27	176.86
	20-May-97		208.54	384.97	385.27	176.43
TF4MW-03	3-Sep-96	202.5-242.5	208.42	384.07	384.53	175.65
	3-Oct-96		209.64	384.07	384.53	174.43
	16-Dec-96		208.00	384.07	384.53	176.07
	6-Jan-97		207.71	384.07	384.53	176.36
	28-Mar-97		206.77	384.07	384.53	177.30
	20-May-97		206.22	384.07	384.53	177.85
18_BGMW12	16-Dec-96	165-205 NM NM	154.54	304.48	304.89	149.94
	28-Mar-97					
	20-May-97					
18_BGMW16	2-Oct-96	223-263	216.18	376.58	375.82	160.40
	16-Dec-96		216.04	376.58	375.82	160.54
	30-Dec-96		215.60	376.58	375.82	160.98
	28-Mar-97		214.62	376.58	375.82	161.96
	20-May-97		214.69	376.58	375.82	161.89
20_UGMW36	7-Oct-96	183-223	184.76	338.70	338.12	153.94
	16-Dec-96		185.52	338.70	338.12	153.18
	30-Dec-96		185.11	338.70	338.12	153.59
	28-Mar-97		184.07	338.70	338.12	154.63
	20-May-97		184.10	338.70	338.12	154.60

